

# TABULAR DATA SHEET

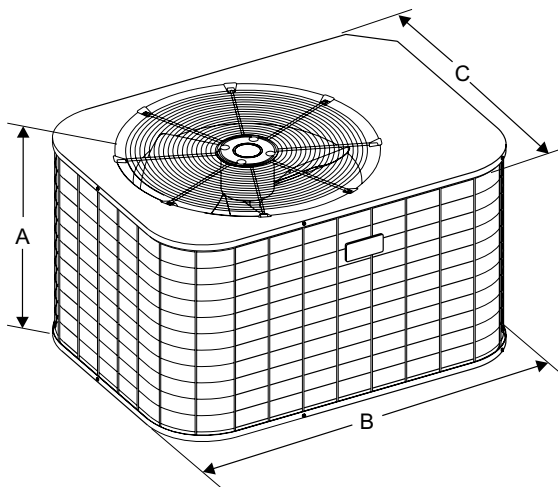
## Outdoor Split System Heat Pump 1.5 Thru 4 Tons

**MODELS: FRHS018\* THRU 048\***  
**14 SEER – R-22**

### Physical and Electrical Data

| MODEL                                     | FRHS0181BE                | FRHS0241CD          | FRHS0301CD          | FRHS0361CD          | FRHS0421CD          | FRHS0481BD          |
|---|---------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Unit Supply Voltage                       | 208-230V, 1 $\phi$ , 60Hz |                     |                     |                     |                     |                     |
| Normal Voltage Range <sup>1</sup>         | 187 to 252                |                     |                     |                     |                     |                     |
| Minimum Circuit Ampacity                  | 9.0                       | 15.5                | 17.7                | 23.1                | 27.8                | 31.8                |
| Max. Overcurrent Device Amps <sup>2</sup> | 15                        | 25                  | 30                  | 40                  | 45                  | 50                  |
| Min. Overcurrent Device Amps <sup>3</sup> | 15                        | 20                  | 20                  | 25                  | 30                  | 35                  |
| Compressor Type <sup>4</sup>              | Recip                     | Scroll <sup>C</sup> | Scroll <sup>C</sup> | Scroll <sup>C</sup> | Scroll <sup>C</sup> | Scroll <sup>D</sup> |
| Compressor Amps                           | Rated Load                | 6.8                 | 11.8                | 13.6                | 17.4                | 21.2                |
|   | Locked Rotor              | 36.0                | 56                  | 72.5                | 88                  | 104                 |
| Crankcase Heater                          | Yes                       | No                  | No                  | No                  | No                  | No                  |
| Fan Motor Amps                            | Rated Load                | 1.5                 | .7                  | .7                  | 1.3                 | 1.3                 |
|   | Locked Rotor              | 1.5                 | .7                  | .7                  | 1.3                 | 1.3                 |
| Fan Diameter Inches                       | 22                        | 24                  | 24                  | 24                  | 24                  | 24                  |
| Fan Motor                                 | Rated HP                  | 1/4                 | 1/10                | 1/10                | 1/4                 | 1/4                 |
|   | Nominal RPM               | 850                 | 850                 | 850                 | 850                 | 850                 |
|   | Nominal CFM               | 3,250               | 2,300               | 2,300               | 3,200               | 3,400               |
| Coil                                      | Face Area Sq. Ft.         | 18.3                | 18                  | 18                  | 22.5                | 27                  |
|   | Rows Deep                 | 1                   | 2                   | 2                   | 2                   | 2                   |
|   | Fin / Inches              | 22                  | 14                  | 14                  | 14                  | 14                  |
| Liquid Line Set OD (Field Installed)      | 3/8                       | 3/8                 | 3/8                 | 3/8                 | 3/8                 | 3/8                 |
| Vapor Line Set OD (Field Installed)       | 3/4                       | 7/8                 | 7/8                 | 1-1/8               | 1-1/8               | 1-1/8               |
| Unit Charge (Lbs. - Oz.) <sup>5</sup>     | 8 - 1                     | 10 - 5              | 12 - 4              | 14 - 7              | 14 - 7              | 14 - 10             |
| Charge Per Foot, Oz.                      | .68                       | .70                 | .70                 | .76                 | .76                 | .76                 |
| Operating Weight Lbs.                     | 198                       | 212                 | 215                 | 242                 | 252                 | 266                 |

1. Rated in accordance with ARI Standard 110, utilization range "A".
2. Dual element fuses or HACR circuit breaker. Maximum allowable overcurrent protection.
3. Dual element fuses or HACR circuit breaker. Minimum recommended overcurrent protection.
4. All scrolls listed with a superscript "D" are Danfoss scrolls. All scrolls listed with a superscript "C" are Copeland scrolls.
5. The Unit Charge is correct for the outdoor unit, matched indoor coil and 15 feet of refrigerant tubing. For tubing lengths other than 15 feet, add or subtract the amount of refrigerant, using the difference in length multiplied by the per foot value.



All dimensions are in inches. They are subject to change without notice. Certified dimensions will be provided upon request.

| Unit Model | Dimensions (Inches) |    |    | Refrigerant Connection Service Valve Size |       |
|------------|---------------------|----|----|---|-------|
|            | A <sup>1</sup>      | B  | C  | Liquid                                    | Vapor |
| 018        | 31                  | 37 | 27 | 3/8                                       | 3/4   |
| 024        | 26                  | 43 | 32 |   | 7/8   |
| 030        | 26                  | 43 | 32 |   | 1-1/8 |
| 036        | 32                  | 43 | 32 |   |       |
| 042        | 32                  | 43 | 32 |   |       |
| 048        | 38                  | 43 | 32 |   |       |

1. Including Fan Guard.

## R-22 SYSTEM CHARGING PROCEDURE

| Additional R-22 Charge / Orifice Size for Various Matched Systems - 1 Phase |                       |                       |                       |                       |                       |            |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------|
| Outdoor Unit  | FRHS0181BE            | FRHS0241CD            | FRHS0301CD            | FRHS0361CD            | FRHS0421CD            | FRHS0481BD |
| Required TXV  | 1TVM2A1               | 1TVM2A1 or<br>1TVM701 | 1TVM2A1 or<br>1TVM701 | 1TVM2C1 or<br>1TVM702 | 1TVM2C1 or<br>1TVM703 | 1TVM703    |
| Factory R-22 Charge, lbs-oz   | 8 - 1                 | 10 - 5                | 12 - 4                | 14 - 7                | 14 - 7                | 14 - 10    |
| Indoor Coil <sup>1,2</sup>  | Additional Charge, Oz |                       |                       |                       |                       |            |
| FC/MC/PC/UC36A2A  | 0                     | 0                     | 0                     | -                     | -                     | -          |
| FC/MC/PC/UC36B2A  | 0                     | 0                     | 0                     | -                     | -                     | -          |
| FC/MC/PC/UC36C2A  | 0                     | 0                     | 0                     | -                     | -                     | -          |
| FC/MC/PC/UC42B2C  | -                     | -                     | -                     | 0                     | -                     | -          |
| FC/MC/PC/UC42C2C  | -                     | -                     | -                     | 0                     | -                     | -          |
| FC/MC/PC/UC48C2C  | -                     | -                     | -                     | 0                     | 0                     | -          |
| FC/MC/PC/UC48D2C  | -                     | -                     | -                     | 0                     | 0                     | -          |
| FC/PC/UC60C2C   | -                     | -                     | -                     | 0                     | 0                     | -          |
| FC/MC/PC/UC60D2C  | -                     | -                     | -                     | 0                     | 0                     | -          |
| MC61D2C   | -                     | -                     | -                     | -                     | 0                     | 0          |
| FC/MC62D2C  | -                     | -                     | -                     | -                     | 0                     | 0          |
| HC36B2A   | 0                     | -                     | -                     | -                     | -                     | -          |
| HC42C2C   | -                     | -                     | -                     | 0                     | -                     | -          |
| HC60C2C   | -                     | -                     | -                     | -                     | 0                     | -          |
| HD36B2A   | 0                     | 0                     | -                     | -                     | -                     | -          |
| HD48C2C   | -                     | -                     | -                     | 0                     | -                     | -          |
| HD60D2C   | -                     | -                     | -                     | -                     | 0                     | -          |
| AHP24B2A  | 0                     | -                     | -                     | -                     | -                     | -          |
| AHP30B2A  | -                     | 0                     | 0                     | -                     | -                     | -          |
| AHP36B2A  | -                     | -                     | 0                     | -                     | -                     | -          |
| AHP42C2C  | -                     | -                     | -                     | 0                     | 0                     | -          |
| AHP/SHP48D2C  | -                     | -                     | -                     | -                     | 0                     | -          |
| AHP/SHP60D2C  | -                     | -                     | -                     | 0                     | 0                     | -          |
| AV36C2A   | -                     | 0                     | 0                     | -                     | -                     | -          |
| AV/SV48D2C  | -                     | -                     | -                     | 0                     | 0                     | -          |
| AV/SV60D2C  | -                     | -                     | -                     | -                     | 0                     | -          |
| MH30S   | 2                     | -                     | -                     | -                     | -                     | -          |
| MH36S   | -                     | 0                     | 0                     | -                     | -                     | -          |
| MH42S   | -                     | -                     | -                     | 0                     | -                     | -          |
| FC/MC/PC/UC35B3X  | -                     | 0                     | 0                     | 0                     | -                     | -          |
| FC/MC/PC/UC35C3X  | -                     | 0                     | 0                     | 0                     | -                     | -          |
| FC/MC/PC/UC36A3X  | 0                     | -                     | -                     | -                     | -                     | -          |
| FC/MC/PC/UC36B3X  | 0                     | -                     | -                     | -                     | -                     | -          |
| FC/MC/PC/UC36C3X  | 0                     | -                     | -                     | -                     | -                     | -          |
| FC/MC/PC/UC42B3X  | -                     | 0                     | 0                     | 0                     | -                     | -          |
| FC/MC/PC/UC42C3X  | -                     | 0                     | 0                     | 0                     | -                     | -          |
| FC/MC/PC/UC48C3X  | -                     | 0                     | 0                     | 0                     | 0                     | 0          |
| FC/MC/PC/UC48D3X  | -                     | -                     | 0                     | 0                     | 0                     | 0          |
| FC/PC/UC60C3X   | -                     | -                     | 0                     | 0                     | 0                     | 0          |
| FC/MC/PC/UC60D3X  | -                     | -                     | 0                     | 0                     | 0                     | 0          |
| FC/MC/PC61D3X   | -                     | -                     | -                     | -                     | 0                     | 0          |
| FC/MC62D3X  | -                     | -                     | -                     | -                     | 0                     | 0          |
| HC36B2A   | 0                     | -                     | -                     | -                     | -                     | -          |
| HC42C3X   | -                     | 0                     | 0                     | 0                     | -                     | -          |
| HC60C3X   | -                     | -                     | -                     | -                     | 0                     | 0          |

| <b>Additional R-22 Charge / Orifice Size for Various Matched Systems - 1 Phase (Continued)</b> |                              |                       |                       |                       |                       |            |
|--|------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------|
| Outdoor Unit   | FRHS0181BE                   | FRHS0241CD            | FRHS0301CD            | FRHS0361CD            | FRHS0421CD            | FRHS0481BD |
| Required TXV   | 1TVM2A1                      | 1TVM2A1 or<br>1TVM701 | 1TVM2A1 or<br>1TVM701 | 1TVM2C1 or<br>1TVM702 | 1TVM2C1 or<br>1TVM703 | 1TVM703    |
| Factory R-22 Charge, lbs-oz  | 8 - 1                        | 10 - 5                | 12 - 4                | 14 - 7                | 14 - 7                | 14 - 10    |
| <b>Indoor Coil<sup>1,2</sup></b>   | <b>Additional Charge, Oz</b> |                       |                       |                       |                       |            |
| HD36B3X  | 0                            | 0                     | -                     | -                     | -                     | -          |
| HD48C3X  | -                            | -                     | 0                     | 0                     | -                     | -          |
| HD60D3X  | -                            | -                     | -                     | -                     | 0                     | 0          |
| AHP24B3X   | 0                            | -                     | -                     | -                     | -                     | -          |
| AHP30B3X   | -                            | 0                     | 0                     | -                     | -                     | -          |
| AHP36B3X   | -                            | -                     | 0                     | 0                     | -                     | -          |
| AHP42C3X   | -                            | -                     | -                     | 0                     | 0                     | -          |
| AHP/SHP48D3X   | -                            | -                     | -                     | -                     | 0                     | 0          |
| AHP/SHP60D3X   | -                            | -                     | -                     | 0                     | 0                     | 0          |
| AV36C3X  | -                            | 0                     | 0                     | -                     | -                     | -          |
| AV/SV48D3X   | -                            | -                     | -                     | 0                     | 0                     | 0          |
| AV/SV60D3X   | -                            | -                     | -                     | -                     | 0                     | 0          |
| F*FP045H06   | -                            | -                     | -                     | 0                     | -                     | -          |
| F*FV060H06   | -                            | -                     | -                     | 0                     | 0                     | 0          |

**FOOTNOTES:**

1. Systems matched with furnace or air handlers not equipped with blower-off delays may require blower Time Delay Kit 2FD06700224.
  2. PC coils cannot be used in downflow or horizontal applications. FC coils cannot be used in horizontal applications.
- \* This loose coil match does not achieve 14 SEER.

**PROCEDURES:**

1. Unit factory charge listed on the unit nameplate includes refrigerant for the condenser, the smallest evaporator and for 15 feet of interconnecting line tubing.
2. Verify the TXV and additional charge required for specific evaporator coil in the system using the above table.
3. Additional charge for the amount of interconnecting line tubing greater than 15 feet at the rate specified in the table above.
4. Permanently mark the unit nameplate with the total system charge. Total System Charge = Base Charge (as shipped) + adder for evaporator + adder for line set.

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256947-BTD-C-0108  
Supersedes: 256947-BTD-B-0706

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